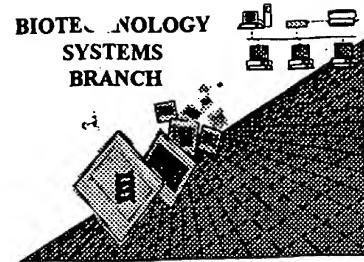


## RAW SEQUENCE LISTING ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/903,323

Source: O1PE

Date Processed by STIC: 7/25/2001

**THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.**

**PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:**

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CFR SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

**FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.**

**PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)**

**PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)**

**TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:**

### **Checker Version 3.0**

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO).

Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

**Checker Version 3.0 can be down loaded from the USPTO website at the following address:**

**<http://www.uspto.gov/web/offices/pac/checker>**

OIPE

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/903,323

DATE: 07/25/2001  
TIME: 14:03:21

Input Set : A:\seqlist.txt  
Output Set: N:\CRF3\07252001\I903323.raw

SEQUENCE LISTING  
5 (1) GENERAL INFORMATION:  
7 (i) APPLICANT: De Robertis, Edward M.  
8 Bouwmeester, Tewis  
10 (ii) TITLE OF INVENTION: Endoderm, Cardiac and Neural Inducing  
11 Factors  
13 (iii) NUMBER OF SEQUENCES: 10  
15 (iv) CORRESPONDENCE ADDRESS:  
16 (A) ADDRESSEE: Majestic, Parsons, Siebert & Hsue  
17 (B) STREET: Four Embarcadero Center, Suite 1100  
18 (C) CITY: San Francisco  
19 (D) STATE: California  
20 (E) COUNTRY: U.S.A.  
21 (F) ZIP: 94111-4106  
23 (v) COMPUTER READABLE FORM:  
24 (A) MEDIUM TYPE: Floppy disk  
25 (B) COMPUTER: IBM PC compatible  
26 (C) OPERATING SYSTEM: PC-DOS/MS-DOS  
27 (D) SOFTWARE: PatentIn Release #1.0, Version #1.25  
29 (vi) CURRENT APPLICATION DATA:  
30 (A) APPLICATION NUMBER: US/09/903,323  
31 (B) FILING DATE: 11-Jul-2001  
32 (C) CLASSIFICATION:  
34 (vii) PRIOR APPLICATION DATA:  
35 (A) APPLICATION NUMBER: US 60/020,150  
36 (B) FILING DATE: 20-JUN-1996  
38 (viii) ATTORNEY/AGENT INFORMATION:  
39 (A) NAME: Siebert, J. Suzanne  
40 (B) REGISTRATION NUMBER: 28,758  
41 (C) REFERENCE/DOCKET NUMBER: 3100.0020S1  
43 (ix) TELECOMMUNICATION INFORMATION:  
44 (A) TELEPHONE: 415/248-5500  
45 (B) TELEFAX: 415/362-5418

Does Not Comply  
Corrected Diskette Needed

## ERRORED SEQUENCES

330 (2) INFORMATION FOR SEQ ID NO: 5:  
332 (i) SEQUENCE CHARACTERISTICS: → 707 (p3)  
333 (A) LENGTH: 979 amino acids  
334 (B) TYPE: amino acid  
335 (D) TOPOLOGY: linear  
337 (ii) MOLECULE TYPE: peptide  
339 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:  
341 Met Leu Leu Leu Phe Arg Ala Ile Pro Met Leu Leu Leu Gly Leu Met  
342 1 5 10 15  
344 Val Leu Gln Thr Asp Cys Glu Ile Ala Gln Tyr Tyr Ile Asp Glu Glu

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/903,323

DATE: 07/25/2001  
TIME: 14:03:21

Input Set : A:\seqlist.txt  
Output Set: N:\CRF3\07252001\I903323.raw

345	20	25	30
347	Glu Pro Pro Gly Thr Val Ile Ala Val Leu Ser Gln His Ser Ile Phe		
348	35	40	45
350	Asn Thr Thr Asp Ile Pro Ala Thr Asn Phe Arg Leu Met Lys Gln Phe		
351	50	55	60
353	Asn Asn Ser Leu Ile Gly Val Arg Glu Ser Asp Gly Gln Leu Ser Ile		
354	65	70	75
356	Met Glu Arg Ile Asp Arg Glu Gln Ile Cys Arg Gln Ser Leu His Cys		
357	85	90	95
359	Asn Leu Ala Leu Asp Val Val Ser Phe Ser Lys Gly His Phe Lys Leu		
360	100	105	110
362	Leu Asn Val Lys Val Glu Val Arg Asp Ile Asn Asp His Ser Pro His		
363	115	120	125
365	Phe Pro Ser Glu Ile Met His Val Glu Val Ser Glu Ser Ser Ser Val		
366	130	135	140
368	Gly Thr Arg Ile Pro Leu Glu Ile Ala Ile Asp Glu Asp Val Gly Ser		
369	145	150	155
371	Asn Ser Ile Gln Asn Phe Gln Ile Ser Asn Asn Ser His Phe Ser Ile		
372	165	170	175
374	Asp Val Leu Thr Arg Ala Asp Gly Val Lys Tyr Ala Asp Leu Val Leu		
375	180	185	190
377	Met Arg Glu Leu Asp Arg Glu Ile Gln Pro Thr Tyr Ile Met Glu Leu		
378	195	200	205
380	Leu Ala Met Asp Gly Gly Val Pro Ser Leu Ser Gly Thr Ala Val Val		
381	210	215	220
383	Asn Ile Arg Val Leu Asp Phe Asn Asp Asn Ser Pro Val Phe Glu Arg		
384	225	230	235
386	Ser Thr Ile Ala Val Asp Leu Val Glu Asp Ala Pro Leu Gly Tyr Leu		
387	245	250	255
389	Leu Leu Glu Leu His Ala Thr Asp Asp Asp Glu Gly Val Asn Gly Glu		
390	260	265	270
392	Ile Val Tyr Gly Phe Ser Thr Leu Ala Ser Gln Glu Val Arg Gln Leu		
393	275	280	285
395	<del>Phe Lys Ile Asn Ser Arg Thr Gly Ser Val Thr Leu Glu Gly Gln Val</del>		
396	290	295	300
398	Asp Phe Glu Thr Lys Gln Thr Tyr Glu Phe Glu Val Gln Ala Gln Asp		
399	305	310	315
401	Leu Gly Pro Asn Pro Leu Thr Ala Thr Cys Lys Val Thr Val His Ile		
402	325	330	335
404	Leu Asp Val Asn Asp Asn Thr Pro Ala Ile Thr Ile Thr Pro Leu Thr		
405	340	345	350
407	Thr Val Asn Ala Gly Val Ala Tyr Ile Pro Glu Thr Ala Thr Lys Glu		
408	355	360	365
410	Asn Phe Ile Ala Leu Ile Ser Thr Thr Asp Arg Ala Ser Gly Ser Asn		
411	370	375	380
413	Gly Gln Val Arg Cys Thr Leu Tyr Gly His Glu His Phe Lys Leu Gln		
414	385	390	395
416	Gln Ala Tyr Glu Asp Ser Tyr Met Ile Val Thr Ser Thr Leu Asp		
417	405	410	415

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/903,323

DATE: 07/25/2001  
TIME: 14:03:21

Input Set : A:\seqlist.txt  
Output Set: N:\CRF3\07252001\I903323.raw

419 Arg Glu Asn Ile Ala Ala Tyr Ser Leu Thr Val Val Ala Glu Asp Leu  
 420 420 425 430  
 422 Gly Phe Pro Ser Leu Lys Thr Lys Lys Tyr Tyr Thr Val Lys Val Ser  
 423 435 440 445  
 425 Asp Glu Asn Asp Asn Ala Pro Val Phe Ser Lys Pro Gln Tyr Glu Ala  
 426 450 455 460  
 428 Ser Ile Leu Glu Asn Asn Ala Pro Gly Ser Tyr Ile Thr Thr Val Ile  
 429 465 470 475 480  
 431 Ala Arg Asp Ser Asp Ser Asp Gln Asn Gly Lys Val Asn Tyr Arg Leu  
 432 485 490 495  
 434 Val Asp Ala Lys Val Met Gly Gln Ser Leu Thr Thr Phe Val Ser Leu  
 435 500 505 510  
 437 Asp Ala Asp Ser Gly Val Leu Arg Ala Val Arg Ser Leu Asp Tyr Glu  
 438 515 520 525  
 440 Lys Leu Lys Gln Leu Asp Phe Glu Ile Glu Ala Ala Asp Asn Gly Ile  
 441 530 535 540  
 443 Pro Gln Leu Ser Thr Arg Val Gln Leu Asn Leu Arg Ile Val Asp Gln  
 444 545 550 555 560  
 446 Asn Asp Asn Cys Pro Val Ile Thr Asn Pro Leu Leu Asn Asn Gly Ser  
 447 565 570 575  
 449 Gly Glu Val Leu Leu Pro Ile Ser Ala Pro Gln Asn Tyr Leu Val Phe  
 450 580 585 590  
 452 Gln Leu Lys Ala Glu Asp Ser Asp Glu Gly His Asn Ser Gln Leu Phe  
 453 595 600 605  
 455 Tyr Thr Ile Leu Arg Asp Pro Ser Arg Leu Phe Ala Ile Asn Lys Glu  
 456 610 615 620  
 458 Ser Gly Glu Val Phe Leu Lys Gln Leu Asn Ser Asp His Ser Glu  
 459 625 630 635 640  
 461 Asp Leu Ser Ile Val Val Ala Val Tyr Asp Leu Gly Arg Pro Ser Leu  
 462 645 650 655  
 464 Val Ala Asn Arg Met His Ala Glu Tyr Glu Arg Asp Leu Val Asn Arg  
 E--> 465 930 660 935 665 940 670  
 467 Ser Ala Thr Leu Ser Pro Gln Arg Ser Ser Ser Arg Tyr Gln Glu Phe  
 E--> 468 945 675 950 680 955 685 960  
 470 Asn Tyr Ser Pro Gln Ile Ser Arg Gln Leu His Pro Ser Glu Ile Ala  
 E--> 471 690 965 695 970 700 975  
 E--> 473 Thr Thr Phe 705  
 780 (2) INFORMATION FOR SEQ ID NO: 9:  
 782 (i) SEQUENCE CHARACTERISTICS:  
 783 (A) LENGTH: 325 amino acids  
 784 (B) TYPE: amino acid  
 785 (D) TOPOLOGY: linear  
 787 (ii) MOLECULE TYPE: peptide  
 789 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:  
 791 Met Val Cys Gly Ser Pro Gly Gly Met Leu Leu Leu Arg Ala Gly Leu  
 E--> 792 1 5 10 15  
 794 Leu Ala Leu Ala Ala Leu Cys Leu Leu Arg Val Pro Gly Ala Arg Ala  
 795 20 25 30  
 797 Ala Ala Cys Glu Pro Val Arg Ile Pro Leu Cys Lys Ser Leu Pro Trp

misaligned  
 and and  
 no. (see  
 item 3  
 on Exam  
 summary  
 sheet)

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/903,323

DATE: 07/25/2001  
TIME: 14:03:21

Input Set : A:\seqlist.txt  
Output Set: N:\CRF3\07252001\I903323.raw

798	35	40	45													
800	Asn	Met	Thr	Lys	Met	Pro	Asn	His	Leu	His	His	Ser	Thr	Gln	Ala	Asn
801	50	55	60													
803	Ala	Ile	Leu	Ala	Ile	Glu	Gln	Phe	Glu	Gly	Leu	Leu	Gly	Thr	His	Cys
804	65	70	75	80												
806	Ser	Pro	Asp	Leu	Leu	Phe	Phe	Leu	Cys	Ala	Met	Tyr	Ala	Pro	Ile	Cys
807	85	90	95													
809	Thr	Ile	Asp	Phe	Gln	His	Glu	Pro	Ile	Lys	Pro	Cys	Lys	Ser	Val	Cys
810	100	105	110													
812	Glu	Arg	Ala	Arg	Gln	Gly	Cys	Glu	Pro	Ile	Leu	Ile	Lys	Tyr	Arg	His
813	115	120	125													
815	Ser	Trp	Pro	Glu	Asn	Leu	Ala	Cys	Glu	Leu	Pro	Val	Tyr	Asp	Arg	
816	130	135	140													
818	Gly	Val	Cys	Ile	Ser	Pro	Glu	Ala	Ile	Val	Thr	Ala	Asp	Gly	Ala	Asp
819	145	150	155	160												
821	Phe	Pro	Met	Asp	Ser	Ser	Asn	Gly	Asn	Cys	Arg	Gly	Ala	Ser	Ser	Glu
822	165	170	175													
824	Arg	Cys	Lys	Cys	Lys	Pro	Ile	Arg	Ala	Thr	Gln	Lys	Thr	Tyr	Phe	Arg
825	180	185	190													
827	Asn	Asn	Tyr	Asn	Tyr	Val	Ile	Arg	Ala	Lys	Val	Lys	Glu	Ile	Lys	Thr
828	195	200	205													
830	Lys	Cys	His	Asp	Val	Thr	Ala	Val	Val	Glu	Val	Lys	Glu	Ile	Leu	Lys
831	210	215	220													
833	Ser	Ser	Leu	Val	Asn	Ile	Pro	Arg	Asp	Thr	Val	Asn	Leu	Tyr	Thr	Ser
834	225	230	235	240												
836	Ser	Gly	Cys	Leu	Cys	Pro	Pro	Leu	Asn	Val	Asn	Glu	Glu	Tyr	Ile	Ile
837	245	250	255													
839	Met	Gly	Tyr	Glu	Asp	Glu	Glu	Arg	Ser	Arg	Leu	Leu	Leu	Val	Glu	Gly
840	260	265	270													
842	Ser	Ile	Ala	Glu	Lys	Trp	Lys	Asp	Arg	Leu	Gly	Lys	Lys	Val	Lys	Arg
843	275	280	285													
845	Trp	Asp	Met	Lys	Leu	Arg	His	Leu	Gly	Leu	Ser	Lys	Ser	Asp	Ser	Ser
846	290	295	300													
848	Asn	Ser	Asp	Ser	Thr	Gln	Ser	Gln	Lys	Ser	Gly	Arg	Asn	Ser	Asn	Pro
849	305	310	315	320												
851	Arg	Gln	Ala	Arg	Asn											
852			325													

VERIFICATION SUMMARY  
PATENT APPLICATION: US/09/903,323

DATE: 07/25/2001  
TIME: 14:03:22

Input Set : A:\seqlist.txt  
Output Set: N:\CRF3\07252001\I903323.raw

L:30 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]  
L:31 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]  
L:465 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:5  
M:332 Repeated in SeqNo=5  
L:473 M:203 E: No. of Seq. differs, LENGTH:Input:979 Found:707 SEQ:5  
L:792 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:9